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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,484	08/28/2001	Ali Muhtaroglu	42390.P10961	6234

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EXAMINER

TABONE JR, JOHN J

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 01/02/2004

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/941,484

Applicant(s)

MUHTAROGLU, ALI

Examiner

John J Tabone, Jr.

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 17-20, 26, 30 is/are rejected.
- 7) ☒ Claim(s) 14-16, 21-25, 27-29, 31 and 32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-32 have been examined.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: In Figure 1, the Reference Voltage Regulator 106 as sited on page 7, line 7 is missing the label 106. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The specification is objected to as failing to include a Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The applicant is requested to include a Brief Summary of the Invention on page 3 at line 16.
4. The specification is objected to because of the following informalities: missing period, page 3, line 14. The configuration bits 152 should be numbered 150, page 9, line 1. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 5, 6, 7, 26-29 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5:

The phrase **further comprising second logic coupled to open and close the set of switches...** is indefinite and of wrong use. It is not clear by this claim what the second logic is coupled to. Correction is requested.

Claim 26:

It is not clear where the configuration bits come from: the first number of input pins or second number.

The relationship between the first input pins and second input pins is unclear. Further disclosure is requested.

Claims 6, 7, 27-29:

These claims are rejected because they depend on 5 and 26 and contain the same problems of indefiniteness.

6. Claim 5, 6, 12 and 13 rejected under 35 U.S.C. 112, second paragraph, for insufficient antecedent basis.

Claim 5 recites the limitation "the set of switches" in claim 1. There is insufficient antecedent basis for this limitation in the claim. The set of switches are disclosed in

claim 3 not in claim 1. For the purpose of further examination, the examiner will interpret claim 5 as reading "The integrated circuit of claim 3". Correction is required.

Claims 12 and 13 recite the limitation "set of analog voltages" in claim 8. There is insufficient antecedent basis for this limitation in the claim. For the purpose of further examination, the examiner will interpret claim 12 and 13 as reading "set of DC voltages" in the place of "set of analog voltages". Correction is required.

Claim 6:

This claim is rejected because it depends on claim 5 and contains the same problems of insufficient antecedent basis.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, 8-11, 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews (US-5600247).

Claims 1 and 17:

Matthews teaches of a Digital-to-Analog Converter (DAC) 80 for creating a DC voltage. Matthews teaches of a comparator 84 for comparing the DC voltage and a reference voltage. (See col.6, lines 33-42). Matthews does not explicitly teach the interpretation of the comparator 84 outputs, however, Matthews discloses the comparator 84 outputs

(EDV outputs) are coupled to the microcontroller 64 and are used in internal decision making to present information to the display. (See Figure 4, col. 9, lines 10-21, col. 18, lines 4-9). It would have been obvious to one of ordinary skill in the art at the time the invention was made that Matthews' internal decision making would encompass an interpreting process for interpreting the outputs (EDV states) from the comparator (84). On having ordinary skill in the art would be motivated to do so because Matthews teaches the outputs (EDV states) of the comparator (84) may be presented on the display (col. 9, lines 13-16).

Claim 8:

Matthews teaches of a Digital-to-Analog Converter (DAC) 80 for creating a DC voltage. Matthews teaches of a comparator 84 for comparing the DC voltage and a reference voltage. (See col.6, lines 33-42). Matthews does not explicitly teach the interpretation of the comparator 84 outputs, however, Matthews discloses the comparator 84 outputs (EDV outputs) are coupled to the microcontroller 64 and are used in internal decision making to present information to the display. (See Figure 4, col. 9, lines 10-21, col. 18, lines 4-9). It would have been obvious to one of ordinary skill in the art at the time the invention was made that Matthews' internal decision making would encompass an interpreting process for interpreting the outputs (EDV states) from the comparator (84). On having ordinary skill in the art would be motivated to do so because Matthews teaches the outputs (EDV states) of the comparator (84) may be presented on the display (col. 9, lines 13-16). Matthews further teaches that the negative input of the comparator 84 is connected to the output of a multiplexer 86.

Further, a TEMP signal is input to the multiplexer 86, which TEMP signal represents a temperature variable voltage that is generated in the band gap reference circuit 78 and provides an indication of temperature. (See Figure 4, col.6, lines 39-49).

Claims 2, 9, 18:

Matthews teaches the DAC 80 has digital input connected to the bus 66 to receive a data word, which represents a voltage level that is generated by the microcontroller 64. This converted to an analog voltage by the DAC 80. (See col. 6, lines 33-37). It would have been obvious to one of ordinary skill in the art at the time the invention was made that the DAC 80 is responsive to the data word (configuration bits) to generate DC voltages.

Claims 3, 10, 19:

Matthews teaches the DAC 80 has digital input connected to the bus 66 to receive a data word, which represents a voltage level that is generated by the microcontroller 64. This converted to an analog voltage by the DAC 80 for input to the positive input of a comparator 84. (See col. 6, lines 33-39). It would have been obvious to one of ordinary skill in the art at the time the invention was made that the microcontroller 64 enables the analog voltage (DC voltage) to be applied to the non-inverting input of the comparator 84 (sense amplifier) by being coupled to the DAC 80 (voltage generator).

Claims 4, 11, 20:

Matthews teaches the DAC 80 has digital input connected to the bus 66 to receive a data word, which represents a voltage level that is generated by the

microcontroller 64. This is converted to an analog voltage on an output line 82 for input to the positive input of a comparator 84. (See col. 6, lines 33-39).

8. Claims 26 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuji (US-4928278).

Claim 26, 30:

Otsuji teaches of an IC test system that provides n pin electronics units corresponding to n input/output pins on an IC device (first number of input pins). Each pin electronics unit that includes a test pattern generator A, a waveform formatter circuit 3, a pattern generator 7 and a driver 4. A reference timing signal generator 11 is also provided which output is simultaneously supplied through a switch 16 arranged in each pin electronics unit to a group of signal lines by a signal distributor 14, each extending from each pin electronics unit 9-i to its corresponding input/output pin 1-i ($i=1, 2, 3, \dots, n$) (a second smaller number of input pins) of the IC device 1 under test through switches 17 and 18 arranged in each pin electronics unit. (See col. 7, lines 40-68). Otsuji does not explicitly disclose a "levels generating circuitry", however, Otsuji does disclose a driver 4 that supplies the test signal pattern to the comparator 5 through the switch 17 and 16. (See col.8, lines 28-30). It would have been obvious to one of ordinary skill in the art at the time the invention was made that the driver 4 would have been named as the "levels generating circuitry", which is also coupled to the pins via switches 17 and 18. The artisan would be motivated to do so because Otsuji's driver 4 also supplies levels to the comparator 5.

Claim Objections

9. Claims 5-7, 12, 13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. Claims 14-16, 21-25, 27-29 and 31-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

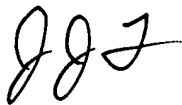
Conclusion

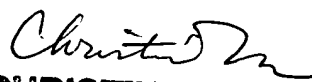
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J Tabone, Jr. whose telephone number is (703)305-8915. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (703)305-9595. The fax phone number for the organization where this application or proceeding is assigned is (703)305-3718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

JJT




CHRISTINE T. TU
Primary Examiner